

Title (en)
N-type HIGFET and method

Title (de)
HIGFET vom N-Leitungstyp und Herstellungsverfahren

Title (fr)
HIGFET du type N et son procédé de fabrication

Publication
EP 0746037 A3 19980415 (EN)

Application
EP 96108453 A 19960528

Priority
US 45985595 A 19950602

Abstract (en)
[origin: US5514891A] An N-type HIGFET (10) utilizes two etch layers (17,18) to form a gate insulator (16) to be shorter than the gate electrode (21). This T-shaped gate structure facilitates forming source (23) and drain (24) regions that are separated from the gate insulator (16) by a distance (22) in order to reduce leakage current and increase the breakdown voltage.

IPC 1-7
H01L 29/43; **H01L 21/335**

IPC 8 full level
H01L 21/285 (2006.01); **H01L 21/335** (2006.01); **H01L 21/338** (2006.01); **H01L 29/778** (2006.01); **H01L 29/80** (2006.01); **H01L 29/812** (2006.01)

CPC (source: EP KR US)
H01L 21/28587 (2013.01 - EP US); **H01L 29/66462** (2013.01 - EP US); **H01L 29/78** (2013.01 - KR); **H01L 29/802** (2013.01 - EP US)

Citation (search report)
• [XA] A. DOMINGO ET AL., APPLIED PHYSICS LETTERS, vol. 52, no. 17, 25 April 1988 (1988-04-25), pages 1395 - 1397, XP002052198
• [A] S. UMEBACHI ET AL., IEEE TRANSACTIONS ON ELECTRON DEVICES, August 1975 (1975-08-01), pages 613 - 614, XP002052044
• [A] M.D. FEUER ET AL., IEEE ELECTRON DEVICE LETTERS, vol. edl-8, no. 1, January 1987 (1987-01-01), pages 33 - 35, XP002052045

Designated contracting state (EPC)
DE FR

DOCDB simple family (publication)
US 5514891 A 19960507; EP 0746037 A2 19961204; EP 0746037 A3 19980415; JP 3396579 B2 20030414; JP H08330576 A 19961213; KR 100311168 B1 20020809; KR 970004083 A 19970129; US 5693544 A 19971202

DOCDB simple family (application)
US 45985595 A 19950602; EP 96108453 A 19960528; JP 15479496 A 19960528; KR 19960018642 A 19960530; US 61629396 A 19960315